ACRONICTA RUMICIS L. (LEP.: NOCTUIDAE): THE DEVELOPMENT AND DECLINE OF MELANISM IN NORTH-WEST KENT

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IN BRITAIN, many moth species have developed melanistic trends, but attention has been bestowed disproportionately upon the Peppered Moth *Biston betularia* L., and the phenomenon has been neglected regarding most other species. *Acronicta rumicis* is one of those other species. It has a well defined melanic form, or forms, stated by Kettlewell (1973) to comprise ab. *salicis* Curtis and ab. *lugubris* Schultz, both industrial melanics, and their descriptions not dissimilar. Added to this there is the further complication that the latter is described by Kettlewell as phenotypically identical with the ancient rural melanics, which he does not identify by name, found in western Scotland and western Ireland. However, these non-industrial melanics are widespread in Ireland (Baynes, 1964) and in Britain (Skinner, 1984).

Thus the melanics of north-west Kent have a dual origin, their appearance is identical and they are invariably referred to as ab. *salicis*. Barrett (1898) states that the melanic form of *A. rumicus* is found "even so far south as Salop" implying that it was absent from southern Britain for most of the nineteenth century. This is substantiated by Chalmers-Hunt (1965) asserting that melanism in *rumicis* was unknown in Kent prior to 1892. In north-west Kent there has also been a development of industrial melanism, but not to the extent attained in central and east London where f. *salicis* has been the dominant form (Plant, 1993).

Several aspects, including melanism and voltinism, of this species were considered in West (1985), but the relative darkening of typical *rumicis* in this area was not noted. Thus, these are a somewhat darker grey than, for example, specimens from the New Forest, or from Co. Clare and Co. Mayo; this feature is a parallel development to that in *A. psi* ab. *suffusa* Tutt which Kettlewell (*op. cit.*) lists as an industrial melanic, and so this form of *rumicis* must be similarly categorised. Although these specimens vary slightly, so far none have been observed to compare with typical New Forest or western Ireland examples.

Table 1 shows the annual percentages of f. *salicis* for the years 1976 to 1999 inclusive, omitting 1980, 1981 and 1986 when samples of *A. rumicis* at the garden m.v. light remained in single figures. Validity of the percentages for several other years is questionable. However, despite these reservations, the table portrays a significant, but erratic decline in the incidence of f. *salicis* over the first half of the period from 20% to under 10%, and for the second half to an average of about 7.5%, with only the initial year possessing a figure over 10%. Presumably the incidence for north-west Kent will stabilise at the figure prevailing for rural south-east England, a figure I have failed to find quoted for any such region. The absence of such information emphasises the somewhat shallow nature of so many county and other regional publications on the macrolepidoptera, yet regularly operated static traps, ideal for such quantative surveys, are legion.

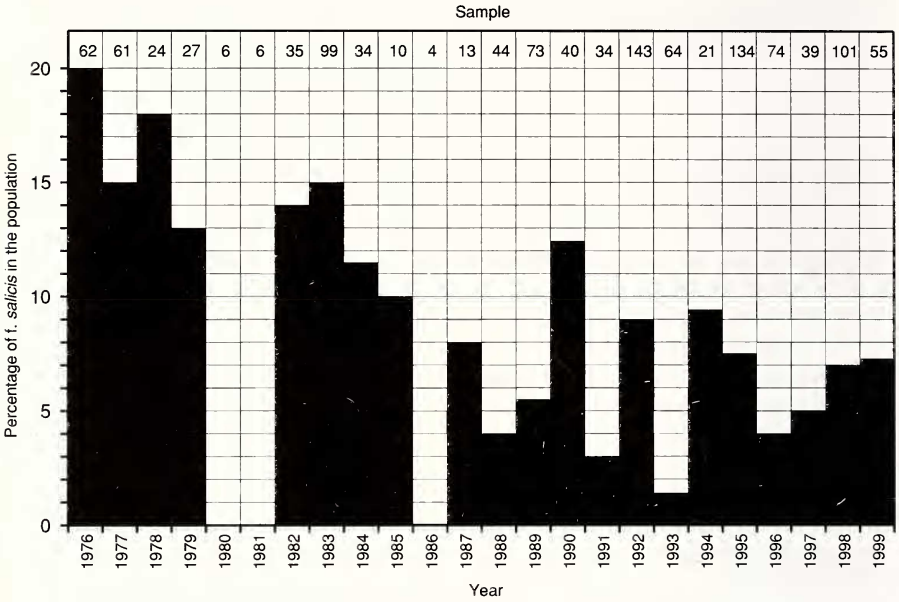

Table 1. *Acronicta rumicis*: annual percentages of f. *salicis* at m.v. light at Dartford for each year from 1976 to 1999. No results are available for the years 1980, 1981 and 1986 when the overall catch fell to single figures.

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